

Glenmoor Elementary School
Fremont School Traffic Safety Assessment
Technical Memo

October 2017

Prepared by Alta Planning + Design

Glenmoor Elementary School

A Traffic Safety Assessment was conducted at Glenmoor Elementary School during afternoon student dismissal on Tuesday, March 28, 2017. The assessment was attended by representatives from the City of Fremont, Alta Planning + Design, and Glenmoor Elementary staff, parents, and volunteers.

School Information

Address	4620 Mattos Drive Fremont, CA 94536
Morning Bell(s)	Kindergarten: 8:10AM, Grades 1-6: 8:30AM
Afternoon Bell(s)	Kindergarten 3:00PM, Grades 1-3: 3:00PM, Grade 4: 2:59PM. Grades 5-6: 2:54PM
Grade Levels	Grades kindergarten - Grade 6
Enrollment	650

Glenmoor Elementary is located on Mattos Drive, in a primarily residential area of Fremont. The school's only street frontage is along Mattos Drive on its northwestern border. Low density residential land uses surround the school on the south and east sides. To the northeast the school is neighbored by James Meyer Memorial Park. In the afternoons, Glenmoor has a volunteer who helps keep cars flowing and pedestrians safe in the drop-off area.

There are three school-related driveways on Mattos Drive (from south to north): Staff parking/drop-off loop entrance, staff parking/handicap student bus loading zone, and the shared exit to both of the aforementioned areas. Besides the loop, parents drop-off their children along Mattos Drive and Glenmoor Drive in addition to parking on neighboring residential streets and walking to campus. There is bike parking available for students in the middle of campus on circular bike racks.

Existing Conditions

The following existing conditions were observed or reported by participants during the walk audit.

1. Drop-off Loop

- ♦ The flow of cars through drop-off loop area was dictated by the bell schedule. While Glenmoor does have a somewhat staggered dismissal schedule, the loop did not flow consistently until after the 3:00PM (last) dismissal bell.
 - This is likely due to some combination of parents/guardians picking up students across multiple grade levels and/or parents showing up early despite picking up a student from a later dismissal. The time difference between bells is also only a few minutes apart.

- ◆ Left turns are currently prohibited for both exiting and entering the drop-off area. Several cars were observed performing both of these maneuvers, with left turn entrees being the more concerning movement.
- ◆ The ability of vehicles to make the right-turn exit onto Mattos Dr is controlled by how many cars are waiting to enter the intersection of Mattos Dr and Glenmoor Dr. This intersection has a high volume of crossing pedestrian traffic, which limits car flows (discussed in more detail later).
- ◆ One school volunteer is stationed in this area to help keep cars flowing/telling them to pull forward to help guide pedestrians to walk in their designated areas.



2. Staff Parking Lot/Handicap Student Bus Loading Area

- ◆ Immediately adjacent to drop-off area is the larger staff parking lot. Near the entrance of this lot is the area that small school buses use to load/unload their handicap students.
- ◆ The aforementioned parent volunteer also attempts to monitor this area.
- ◆ Parents are not supposed to enter this area. Walk audit attendees reported that parents regularly use this space for loading; this blocks the driveway, the bus loading area, and creates conflicts with pedestrians.
- ◆ Despite there being a paved path to the sidewalk along Mattos Dr from the school, via the drop-off loop, many parents and students cut through this lot/loading area as it is slightly more direct than following the path. Many pedestrians continue their straight line off campus and jaywalk across Mattos Dr near the entry driveway to this lot.



3. Mattos Drive

- ◆ Mattos Drive is the primary street frontage for Glenmoor Elementary and has all three school-related driveways.
- ◆ Glenmoor Elementary has a high volume and both pedestrian and bicycle traffic, both of which predominantly use the sidewalk along Mattos Dr.
 - Additionally, a large contingent of students were also observed cutting through the park to get to both Glenmoor Drive and the Mattos/Glenmoor intersection.



- ◆ Cars were observed stopping and parking along Mattos Dr. At the exit driveway, multiple cars were observed parking in the red zone close to the driveway, hampering the visibility of exiting cars.
- ◆ Near the drop-off area entrance driveway, cars were also observed attempting to make a prohibited left turn into the driveway. Cars attempting to make this movement backed up that direction of traffic, which can lead to cars going around creating many additional potential conflicts.
- ◆ Further south on Mattos, cars will park along the curb so that parents can walk towards to school to pick-up their children.
- ◆ Most bicyclists were observed on the sidewalk, although there were a handful of riders who were comfortable enough to ride in the streets.

4. Mattos Drive/Glenmoor Drive

- ◆ Mattos Drive and Glenmoor Drive is a four-way intersection that was observed to have a high volume of pedestrian (both from Glenmoor and other neighboring schools) and vehicle traffic, as well as a substantial number of student bicyclists. The intersection is 4-way stop controlled.
- ◆ Upon dismissal many students will access this intersection from the sidewalk along Mattos and by cutting through the park.
- ◆ Many parents who live to the east, also access the school via this intersection. Older students from neighboring schools were also observed walking southwest through this intersection.
- ◆ The intersection generally flowed fairly well, but was observed to experience delays when there would be a continuous stream of pedestrians, especially across Glenmoor Drive. A crossing guard could be useful to help control the flow of pedestrians, but should not be diverted here from the potential crossing guard at Mattos Drive and Glendale Drive.
- ◆ An ice cream truck was observed parked near the intersection along Glenmoor Drive. It was also reported by audit attendees that this is a regular stop for the ice cream truck. This was shown to be a popular attraction, but should be moved further southeast along Glenmoor Driver, further away from the intersection.



5. Mattos Drive/Glendale Drive

- ◆ Mattos Drive and Glendale Drive is a T-intersection with two crossings across Mattos Drive, giving pedestrians access to either side of Glendale Drive from school frontage.
- ◆ For parents who park and walk on the west/northwest side of the school, these are their primary crossings.
- ◆ The walk audit team observed over 100 crossings at this intersection during the dismissal period.
- ◆ A crossing guard would be very useful here to both help control the flow of vehicles, which is especially important given the close proximity to the entrance to the drop-off loop, and could potentially aid in reducing jaywalking across Mattos.



6. Mattos Drive/Glenview Drive: “The Pork Chop”

- ◆ Mattos Drive and Glenview Drive is an asymmetrical T-intersection.
- ◆ There is a striped median that attempts to square up the intersection to increase visibility at the approaches.
- ◆ It was reported by audit attendees that cars frequently perform U-turns around this intersection.
- ◆ Jaywalking across Mattos north of the intersection was both observed and reported as a frequent occurrence by walk audit attendees.
- ◆ Attendees also reported that drivers have a hard time seeing the crosswalks well in advance of the intersection.

7. Additional Observations

- ◆ Glenmoor Elementary currently has bike parking in the middle of the campus, between classroom buildings. The school should work with the Safe Routes to Schools program to upgrade and increase the amount of bicycle parking.

- ◆ Parents and students crossing through the staff parking lot is continuing problem and parents should be instructed not to do so for safety reasons.



8. Current Safe Routes to School Involvement

- ◆ Glenmoor Elementary does not currently participate in the Alameda County Safe Routes to Schools Program.
- ◆ Joining the SR2S program would provide Glenmoor Elementary with both educational and encouragement resources to educate students about the rules of the road and safety issues as well as encouraging increased travel by Green Modes (walking, biking, carpool, school bus, and transit).

Recommendations

Recommendations to improve infrastructure or operations surrounding Glenmoor Elementary School can be seen on the conceptual improvement plan found on the following page. Engineering cost estimates for the infrastructure recommendations are also provided.

The following improvements are recommendations for policy and program implementation at Glenmoor Elementary School to increase safety and active commutes to school.

Policy & Program Recommendations

- ◆ Distribute Recommended Walk/Bike Maps to students and their families in an effort to promote walking and biking to school on suggested routes. Safety tips are also included on these maps to promote good behavior among bicyclists, pedestrians, and drivers.
- ◆ Join the countywide SR2S program and participant in events such as Bike Rodeos, Pedestrian Safety Rodeos, and International Walk and Roll to School Day.
- ◆ Send regular reminders to parents regarding their drop-off and pick-up location options and encourage parents to leave a few minutes earlier to prevent rushing.
- ◆ Work with parents to connect them with others who live nearby to increase the number of students carpooling, which may reduce the number of vehicles coming to campus. Similarly, Walking School Buses and Bike Trains can be established with the same type of coordination.
- ◆ Regularly remind parents to NOT cross through the staff parking lot and to use the adjacent sidewalk. The school should also consider coning off the area to deter entrance.
- ◆ Work with the operator of the ice cream truck and encourage parking slightly further up Glenmoor Drive, away from the intersection.
- ◆ The school should work with the SR2S program and BAAQMD bike rack voucher program to upgrade the existing on-campus bike parking.

Glenmoor Elementary School, Fremont

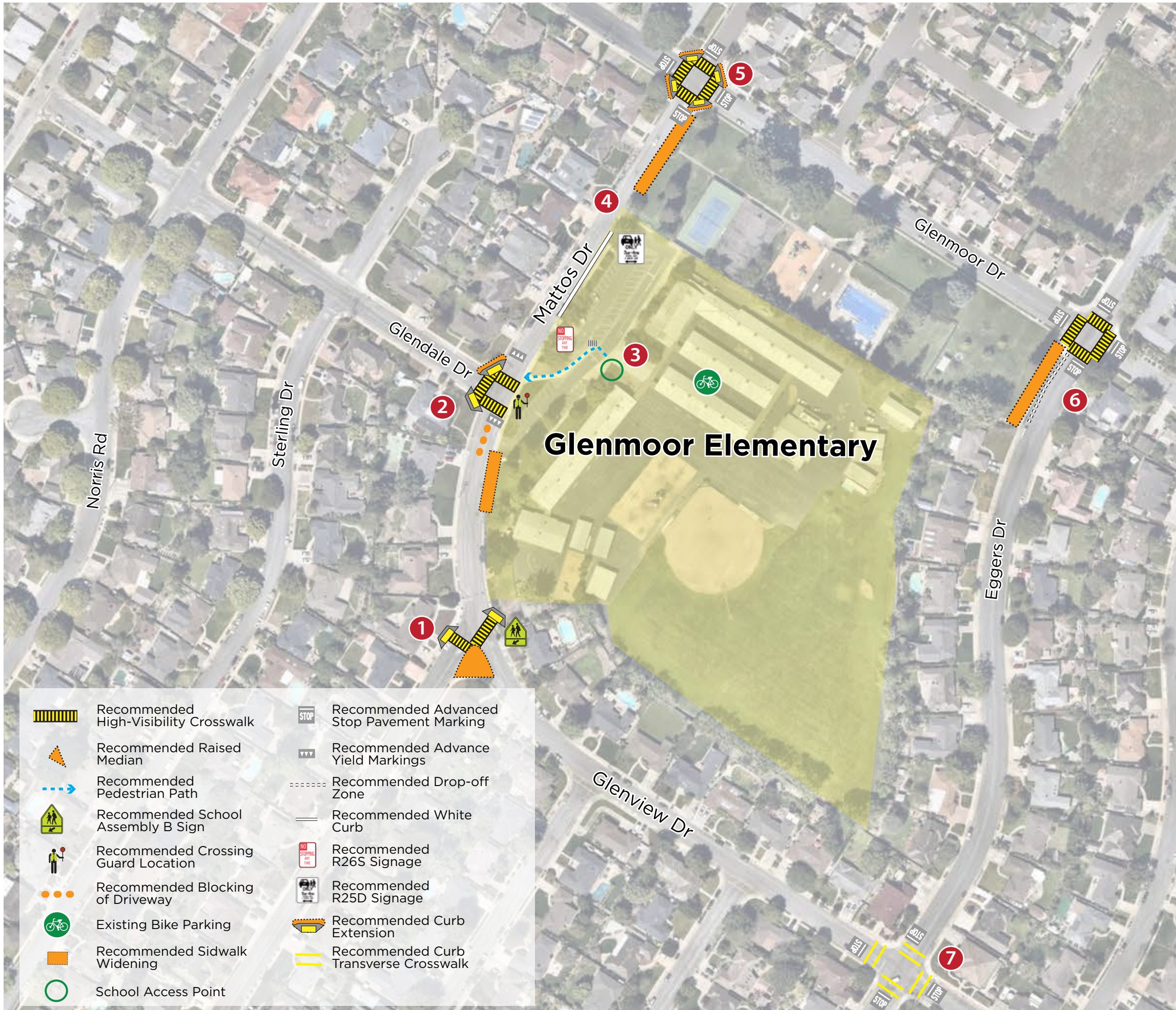
Safe Routes to Schools Improvement Plan

Site Assessment held March 2017

- Mattos Drive / Glenview Drive**
 - Install high visibility crosswalks at two crossings
 - Build out south corner (removing striped pork chop island) to connect crossings and tighten curb radius
 - Install high visibility crosswalk and accessible curb ramps across all legs of intersection.
 - Install School Assembly B Signs at all crosswalks
- Mattos Drive / Glendale Drive**
 - Consider using cones to prevent left turns into school driveway
 - Install advance yield markings and signs before both crossings on Mattos Drive
 - Consider conducting a crossing guard warrant study
 - Consider installing a curb extension at the northeast corner
 - Install high visibility ladder crosswalk across Glendale Drive with ADA curb ramps
 - Refresh two existing high visibility crosswalks across Mattos Drive
- School Parking Lots & Drop-off Area**
 - Convert white crosshatch area to blue to emphasize the area is for handicap student loading and unloading from FUSD buses
 - Install signage/sidewalk markings to encourage parents and students to NOT cut through the staff parking lot. Consider installation of cones to block access
- Mattos Drive**
 - Install R26S "No Stopping" Sign in existing red curb area near driveway
 - Install white curb between driveways for student loading and unloading
 - Install R25D "School Loading" signs along white curb
 - Widen sidewalk were indicated using existing landscaped buffer
- Mattos Drive / Glenmoor Drive**
 - Install high visibility crosswalks on all four legs
 - Install advance stop markings on all four legs
 - Consider installing a curb extension on all four corners
- Glenmoor Drive / Eggers Drive**
 - Install high visibility crosswalks on all four legs
 - Install advance stop markings on all four legs
 - Widen sidewalk using existing landscaped buffer
 - Consider removing parking/stopping restriction on Eggers Drive along the frontage of the park to create additional drop-off/pick-up space
- Glenview Drive / Eggers Drive**
 - Install yellow transverse crosswalks on all four legs
 - Install advance stop markings on all four legs

Note:
Install ADA curb ramps for intersections where applicable

Improvements not to scale
0 200 ft



The above items are recommendations only and based on Safe Routes to Schools site assessment best practices. Feasibility determination, final design, accessibility, funding, and implementation of any recommended improvements is the responsibility of the appropriate governing agency.

**Fremont School Traffic Safety Assessment
Glenmoor Elementary School
Preliminary Cost Estimate**

Alta Planning + Design

11/30/2017

Traffic Safety Improvements

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT COST	COST
1	Mobilization	1	LS	\$31,600	\$32,000
2	Traffic Control	1	LS	\$31,600	\$31,600
3	High Visibility Crosswalk	14	EA	\$2,000	\$28,000
4	Traverse Crosswalk	4	EA	\$500	\$2,000
5	Curb Extension & Ramp	5	EA	\$20,000	\$100,000
6	Curb Ramp Improvement	3	EA	\$5,000	\$15,000
7	Yield Line	2	EA	\$500	\$1,000
8	Sign and Post Assembly	7	EA	\$500	\$3,500
9	Parking Lot Marking & Striping	250	SF	\$5	\$1,300
10	STOP Bar and Pavement Marking	12	EA	\$400	\$4,800
11	Raised Concrete Median (Long Term Improvement)	450	SF	\$20	\$9,000
12	Concrete Sidewalk Widening	4200	SF	\$20	\$84,000
13	Painted Curb Marking	1	LS	\$1,800	\$1,800
14	Painted Curb Marking Removal	1	LS	\$1,200	\$1,200
15	Channelizers and Traffic Cones	1	LS	\$200	\$200
16	Slip Lane Removal with Curb Extension	1	LS	\$60,000	\$60,000
17	Crossing Guard Warrant Study	1	LS	\$4,000	\$4,000
SubTotal Items					\$379,400
CONSTRUCTION CONTINGENCY				20%	\$75,900
Total					\$455,300



Sign In Sheet

PROJECT Fremont School Traffic Safety Assessments
SUBJECT Glenmoor Elementary School
DATE March 28, 2017

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